

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau(43) International Publication Date
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number
WO 2005/040031 A1

(51) International Patent Classification?: B66C 1/06

(74) Agents: HUH, Sung-Won et al.; Shinwon Bldg. 11F,
823-14 Yoksam-dong, Kangnam-ku, Seoul 135-050 (KR).(21) International Application Number:
PCT/KR2004/002707

(22) International Filing Date: 22 October 2004 (22.10.2004)

(25) Filing Language: Korean

(26) Publication Language: English

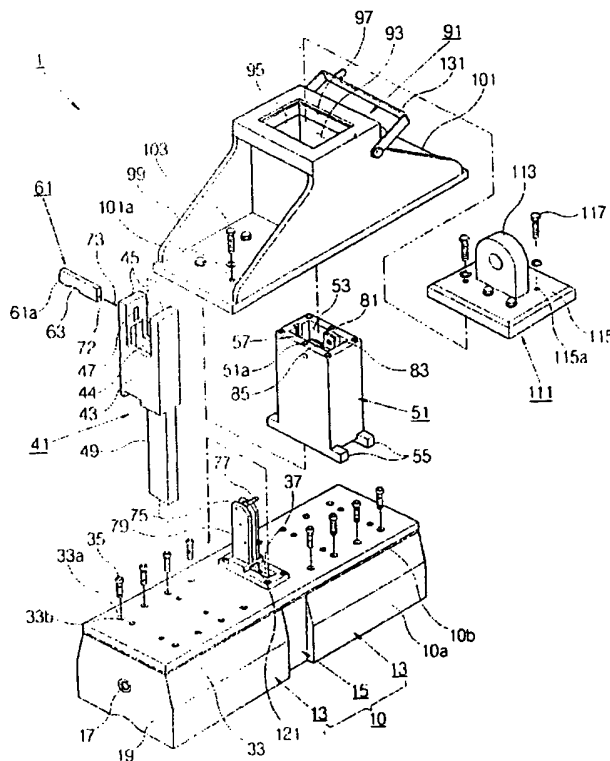
(30) Priority Data:
10-2003-0074629 24 October 2003 (24.10.2003) KR

(71) Applicants and

(72) Inventors: YE, Hae-Kum [KR/KR]; 48-68 Gaya-dong,
Busanjin-gu, Pusan-si 614-010 (KR). HAN, Chang-Ki
[KR/KR]; Byueksan Apt. 101-603, Deokpo-2dong,
Sasang-gu, Pusan-si 617-814 (KR). KIM, Young-Ho
[KR/KR]; Daerim Apt. 105-1101, Hwamyong-dong,
Pusanbuk-gu, Pusan-si 616-786 (KR).(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AI, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: LIFTING MAGNET



(57) Abstract: Disclosed is a lifting magnet with a housing; a rotary magnet unit; and a stationary magnet unit, which comprises a pinion; a socket moving up and down; a lifting slider rotating the pinion to set the magnetization and demagnetization states at top and bottom dead points, respectively; a locking part provided in one of the socket and the lifting slider; a locking unit provided in the other, comprising a locker, and lifting up and down both the socket and the lifting slider while the locker is locked to the locking part; and a locking unit driver alternatively driving the locking unit to make the locker released from and locked to the locking part at first and second lifting operations, respectively. With this configuration, the lifting magnet can stably keep on and off states of an attractive magnetic force and conveniently performs lifting and carrying operations.